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(21) International Application Number: PCT/NL97/00354 (22) International Filing Date: 24 June 1997 (24.06.97) (30) Priority Data: 96201766.1 25 June 1996 (25.06.96) EP (34) Countries for which the regional or international application was filed: AT et al. (71) Applicants (for all designated States except US): STICHTING INSTITUUT VOOR DIERHOUDERIJ EN DIERGEZONDHEID (ID-DLO) [NL/NL]; Edelhartweg 15, NL-8219 PH Lelystad (NL). DANISH VETERINARY INSTITUTE FOR ANIMAL VIRUS RESEARCH [DK/DK]; Lindholm, DK-4771 Kalvehave (DK). (72) Inventors; and (75) Inventors/Applicants (for US only): BEEKMAN, Nico, Johannes, Christiaan, Maria [NL/NL]; Splijthoffkamp 43, NL-8014 GL Zwolle (NL). SCHAAPER, Wilhelmus, Martinus, Maria [NL/NL]; De Specerij 70, NL-1313 NJ Almere (NL). DALSGAARD, Kristian [DK/DK]; Ny Vordingborgvej 80, DK-4771 Kalvehave (DK). MELOEN, Robert, Hans [NL/NL]; Karveel 10-04, NL-8231 AP Lelystad (NL).		(74) Agent: SMULDERS, Th., A., H., J.; Vereenigde Octrooibureaux, Nieuwe Parklaan 97, NL-2587 BN The Hague (NL). (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.	

(54) Title: VACCINE COMPRISING ANTIGENS BOUND TO CARRIERS THROUGH LABILE BONDS

(57) Abstract

The invention is in the field of vaccines and immunogenic preparations. Normally in these preparations antigens and carrier compounds are irreversibly coupled in a stable bond. The invention, to the contrary, provides vaccines and immunogenic preparations in which the antigen (be it protein or peptide or carbohydrate or any other molecule to be used as an antigen for immunization/vaccination procedures) and the carrier compound are coupled in a reversible and labile way, with a so-called labile link. In this way, as is demonstrated in the experimental part of this application, surprisingly a better immune response can be elicited by an in itself poorly immunogenic antigen than by methods that provide a stable link between the antigen and carrier compound.

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